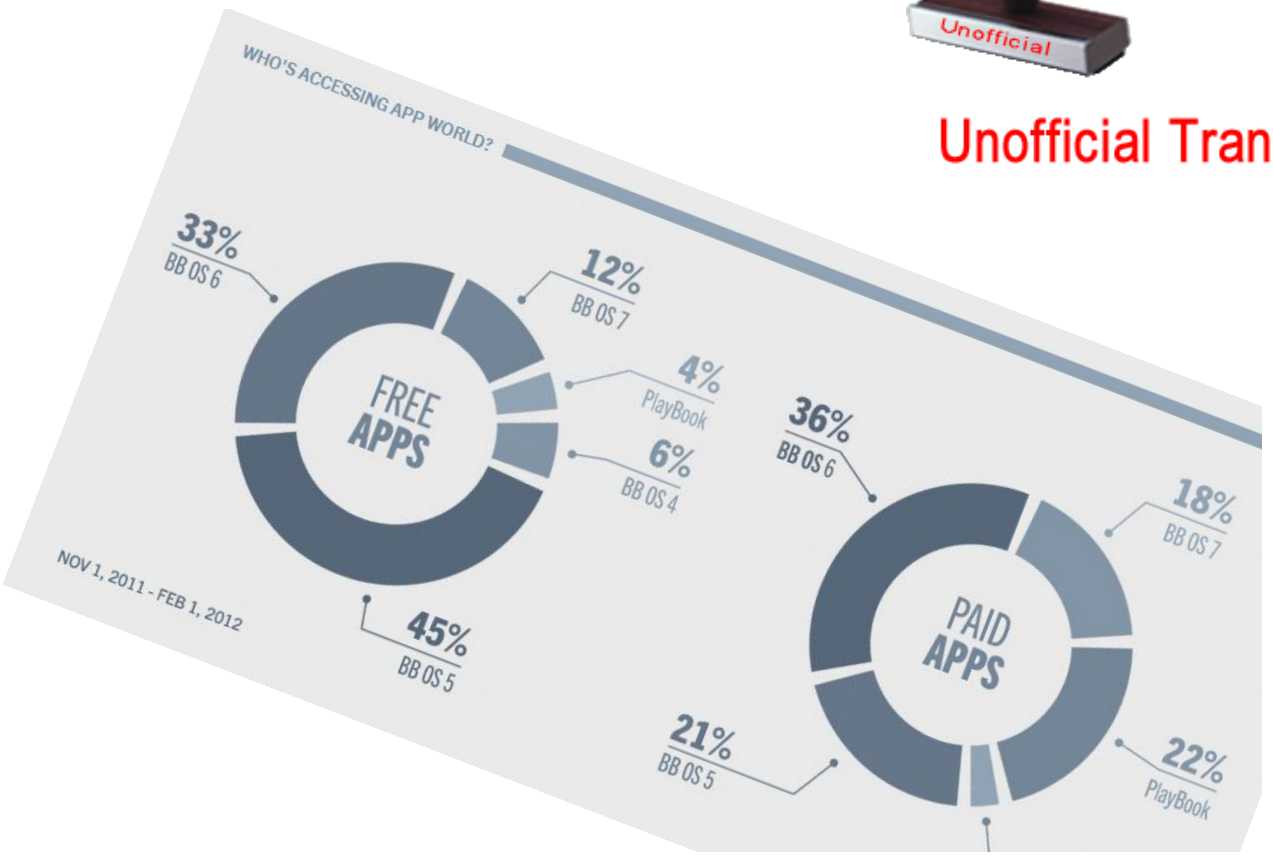
“UNOFFICIAL” BLACKBERRY DEVELOPERS HANDY GUIDE

Unofficial Transcript



ODB 2012.03.13

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Forward

Ever think to yourself:

> **"Man… I sure wish I could get someone to read the entire blackberry.com/developers website, and tell me exactly what I need to know on how on develop for the BlackBerry platform and maybe even give me direct links to download everything".**

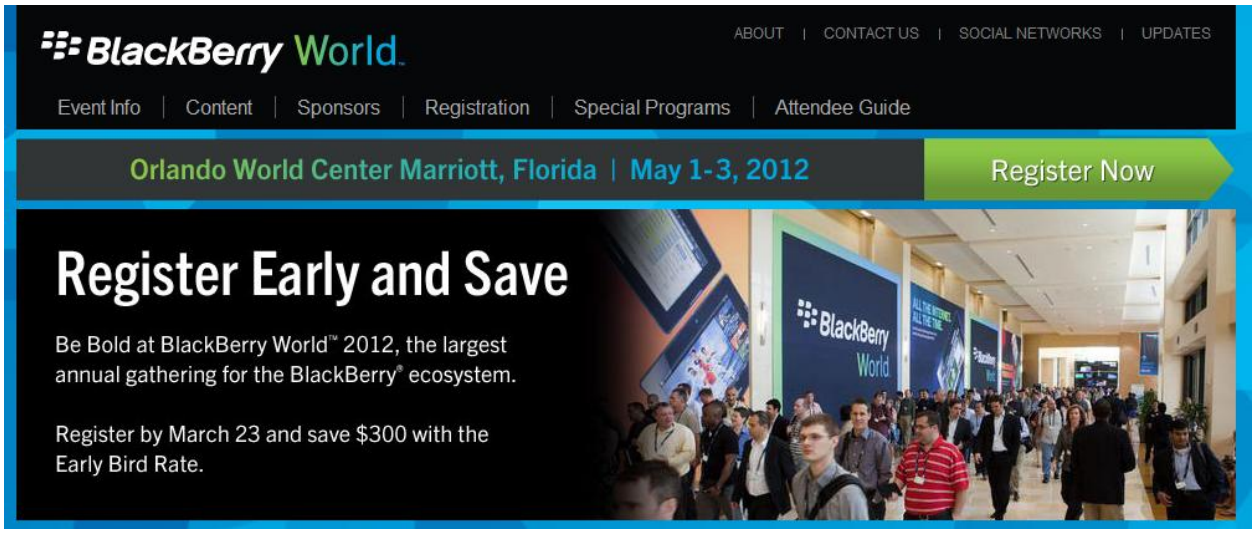
Well here is what you need to know, where to get it, and how to rock it!

Rich Balsewich
Research in Motion

Current Events

If you haven't heard, then let me tell you. These are just some of the events that you should be either in attendance or telling your boss about or both. How else are you going to make the boss look good in front of their boss and their boss's boss or even their boss's boss' boss's boss'.

http://www.blackberryworld.com



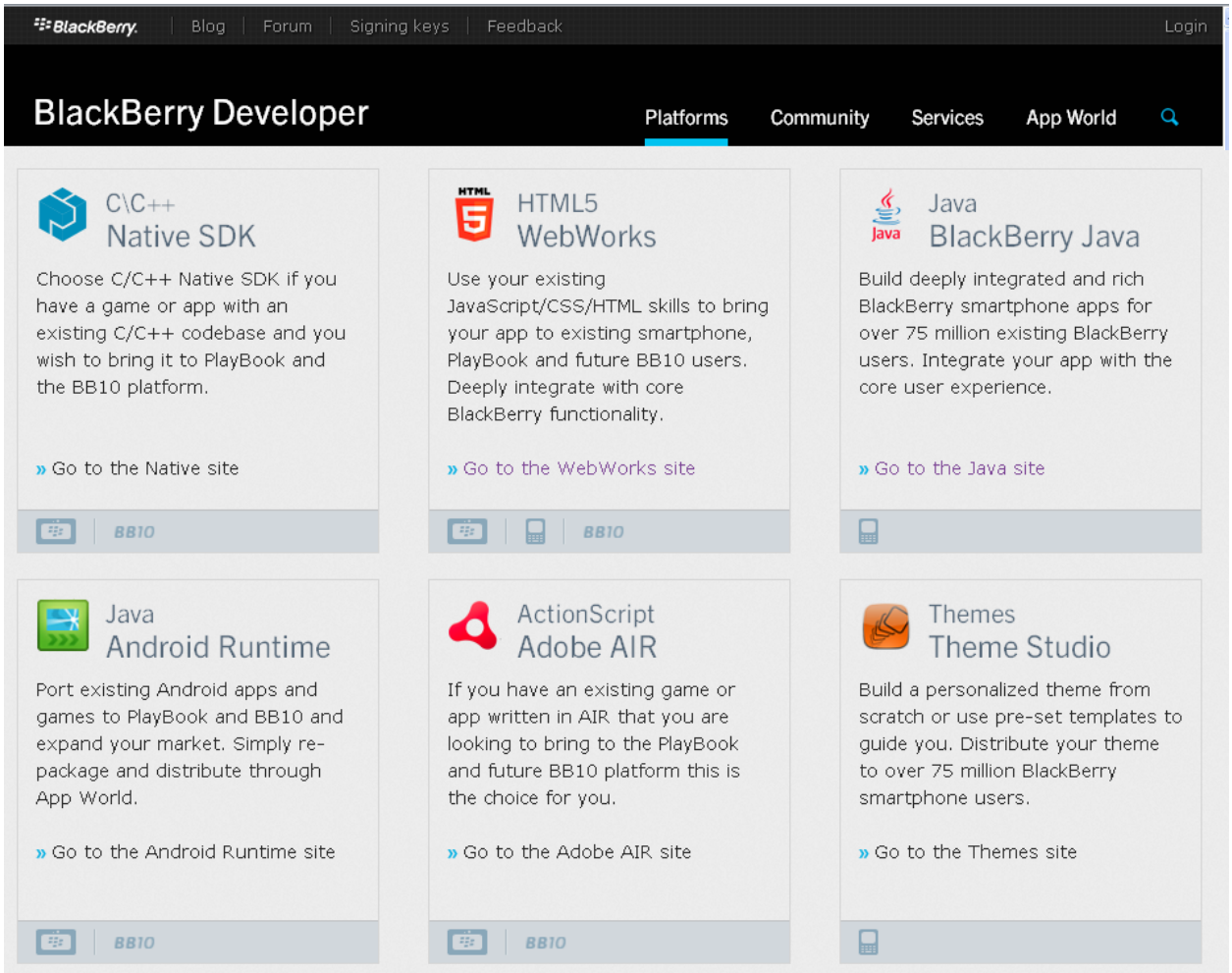
PlayBook 2.0 is out!

We have seen over 90% of you already upgrade, so what's wrong with the other 10%. Check out all the new features and cool social integration. It's not just a toy!

BlackBerry Development

It has never been easier to deliver highly effective real world applications on the BlackBerry Platform. Whether you are focusing at delivering handheld applications, BlackBerry PlayBook applications, or even mobile applications that can run cross-platform, or on any platform, Research in Motion provides you with the options that meet your skill sets. No need to go out and learn all new languages, platforms, or even tools.

Like the old saying “you can build a house with just a hammer…” not sure who would do that… but choose the right tool for the job.



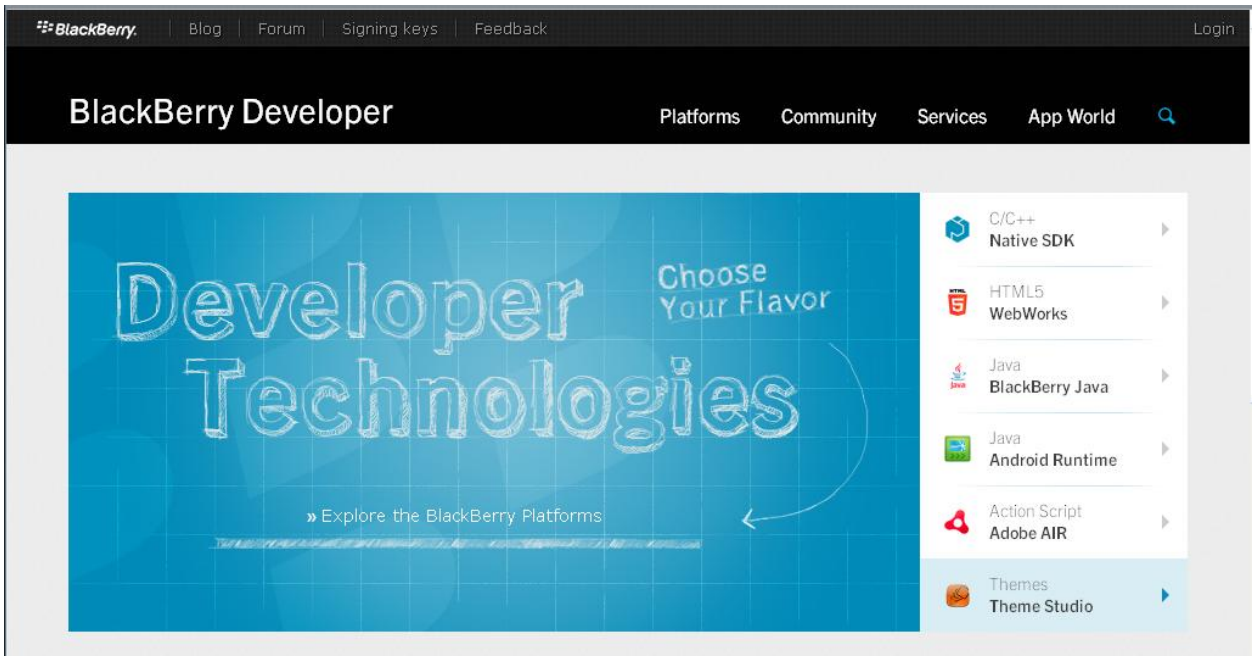
Meet Your New Favorite BlackBerry Bookmarks

Everyone needs a few good friends. Someone you can count on or "click on" anytime you're in need. Here are a few of my good friends. These great places to start should be added to your browser IMMEDIATELY! I highly recommend browser bar shortcuts to save a few clicks.

BlackBerry Developer Zone: http://developer.blackberry.com

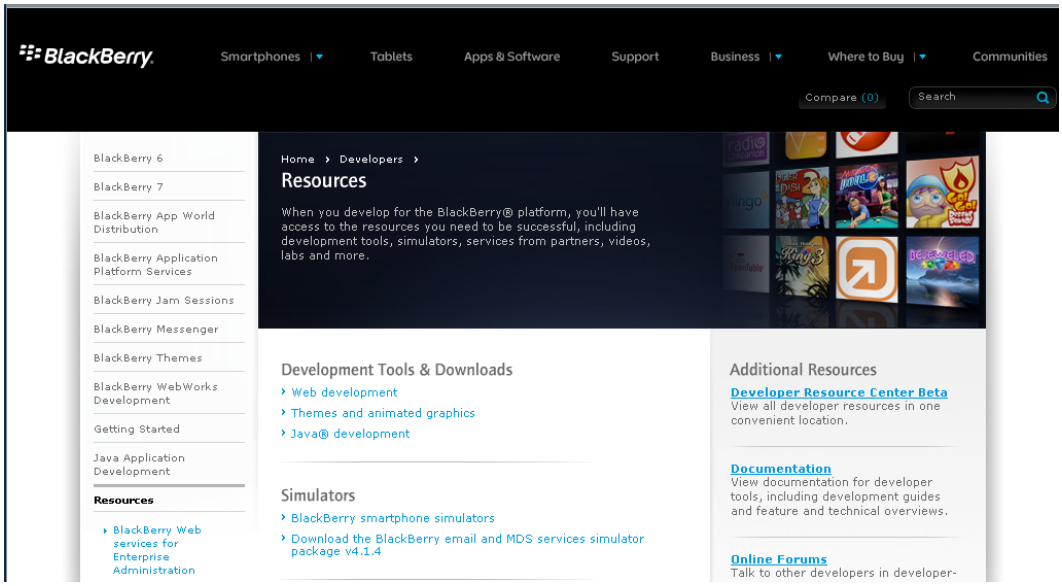
Our developer zone has just been remodel! Now it's easier to find and navigate to the topics that meet your project. This link brings you right to the landing page for BlackBerry Developer Zone. Not a bad place to get started.

If you haven't registered already, start there. It's free and gives you access to everything BlackBerry!



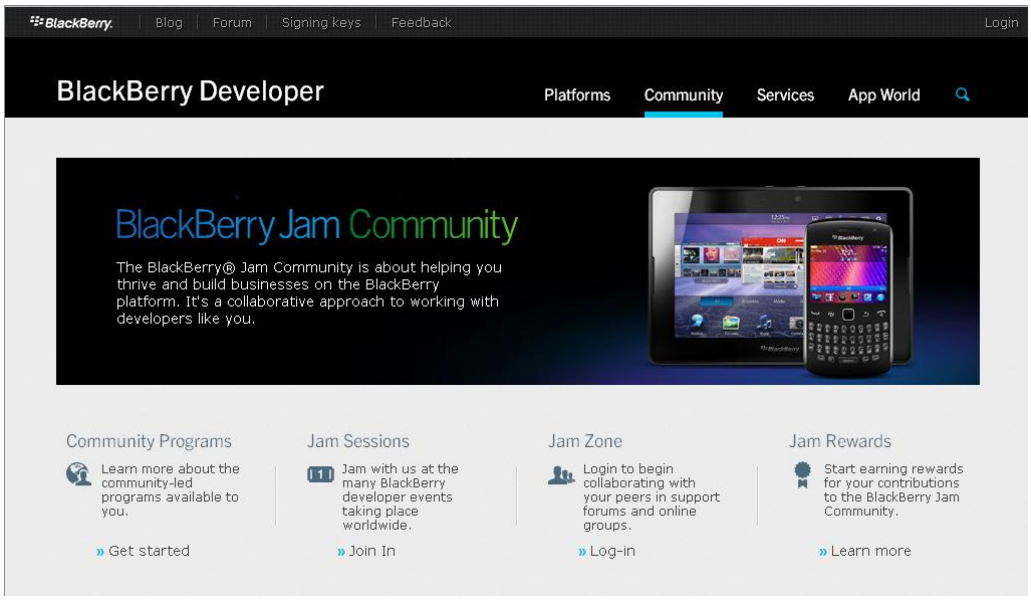
BlackBerry Resource Center: http://us.blackberry.com/developers/resources/

Ever hear "you're only as good as your resources"? Luckily we have A LOT of them. Whether you're looking for a specific simulator to test your application, or looking to connect to everything BlackBerry. This link brings you right to that landing page. **BlackBerry Developer "Resources"**.



BlackBerry Jam Sessions: http://developer.blackberry.com/devzone/jamcommunity

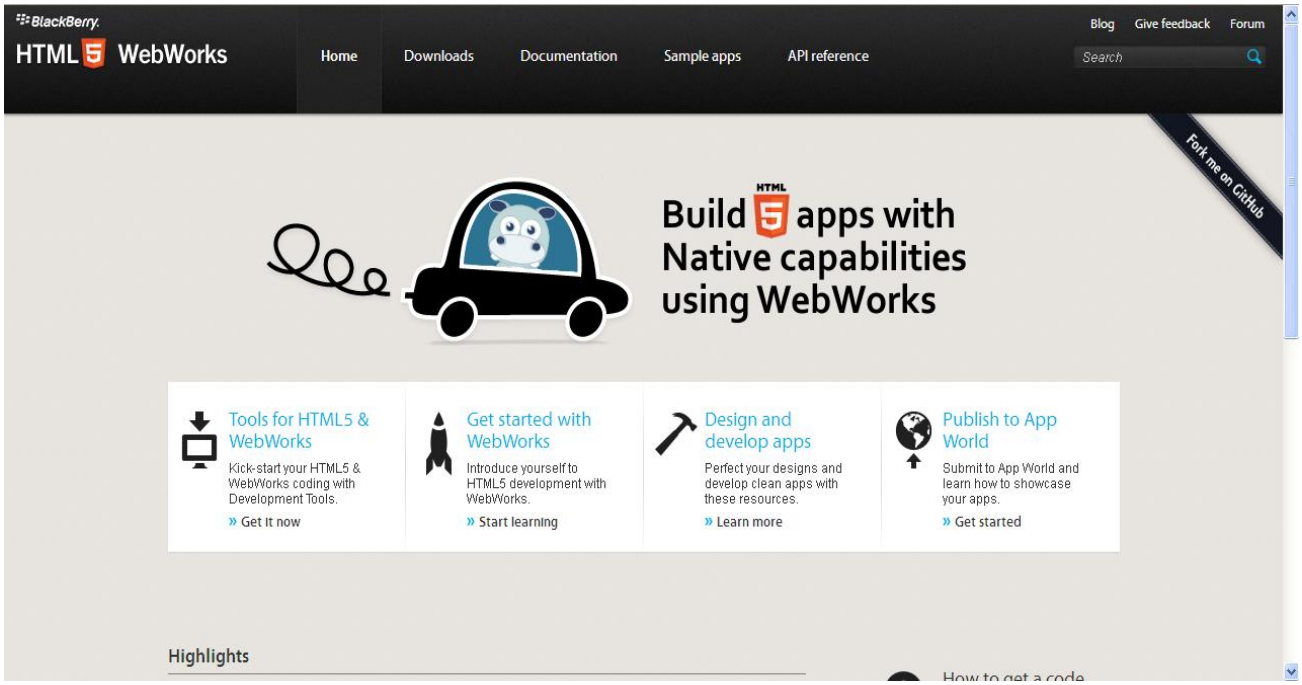
If you haven't heard about **BlackBerry Jam Sessions**, seriously, who hasn't heard of this! Go there now and join in on the fun! If you liked any of the presenters you have seen from RIM, you will LOVE the BlackBerry community.



BlackBerry WebWorks Resource Center: http://developer.blackberry.com/html5/

If you haven't been following what people have been doing with Web Technologies (HTML5, CSS3, JavaScript) lately, then you go hear IMMEDIATELY! Long gone are the days of using strange technologies to create mobile applications. Web technologies are totally in and **BlackBerry WebWorks**! Let RIM handle the complicated native calls, you just focus on simple lines of JavaScript to write enterprise grade applications.

This link brings you right to the landing page for BlackBerry WebWorks landing page. Not a bad place to get started for seeing how you can exploit web technologies to write cool native apps. There are sample applications, documentation and tool downloads.

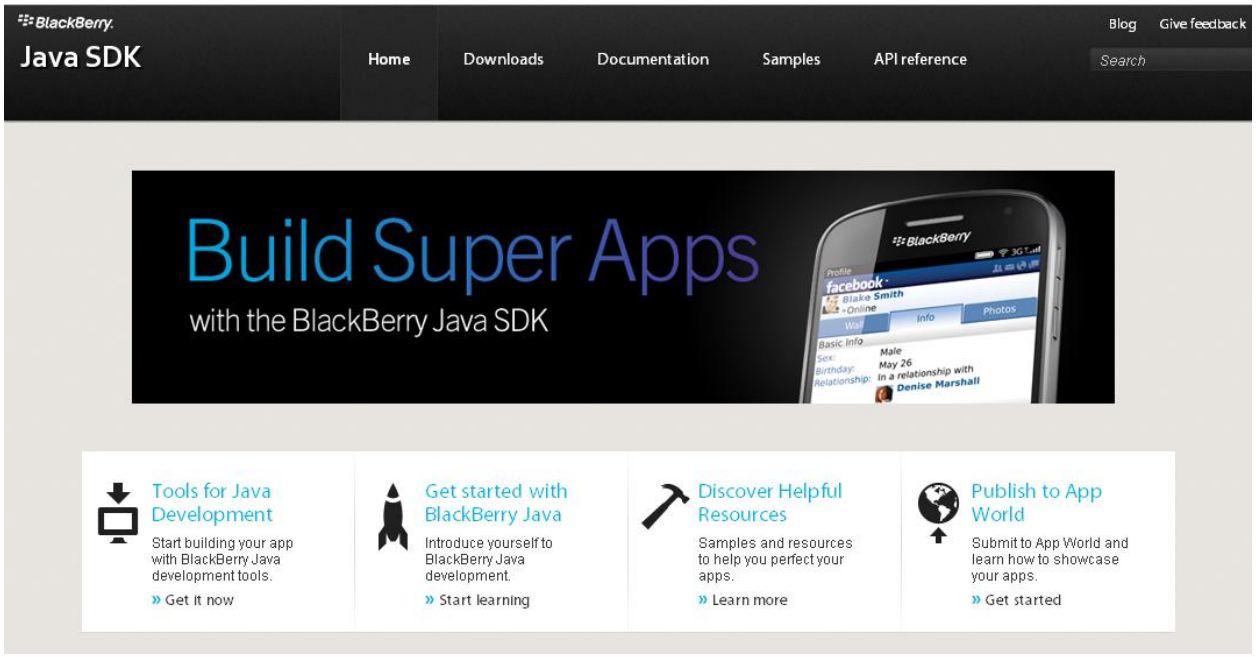


BlackBerry WebWorks API Refence: http://developer.blackberry.com/html5/api

This link brings you to the BlackBerry WebWorks API guide. You might as well launch this before you even start opening whatever Integrated Development Environment (IDE) you're using to write code. Has code snippets for all available extensions, which means **copy and paste** will be fun!

BlackBerry Java SDK: http://developer.blackberry.com/java

If you're a Java guru then take your SUPER APPS native! Our handhelds like Java, so should you! There are 20,000+ APIs you can exploit on the platform. Since our platform has been around for more than just a ***FEW*** years, we have tons of historic examples to learn from.



BlackBerry Java SDK Docs: http://developer.blackberry.com/java/documentation

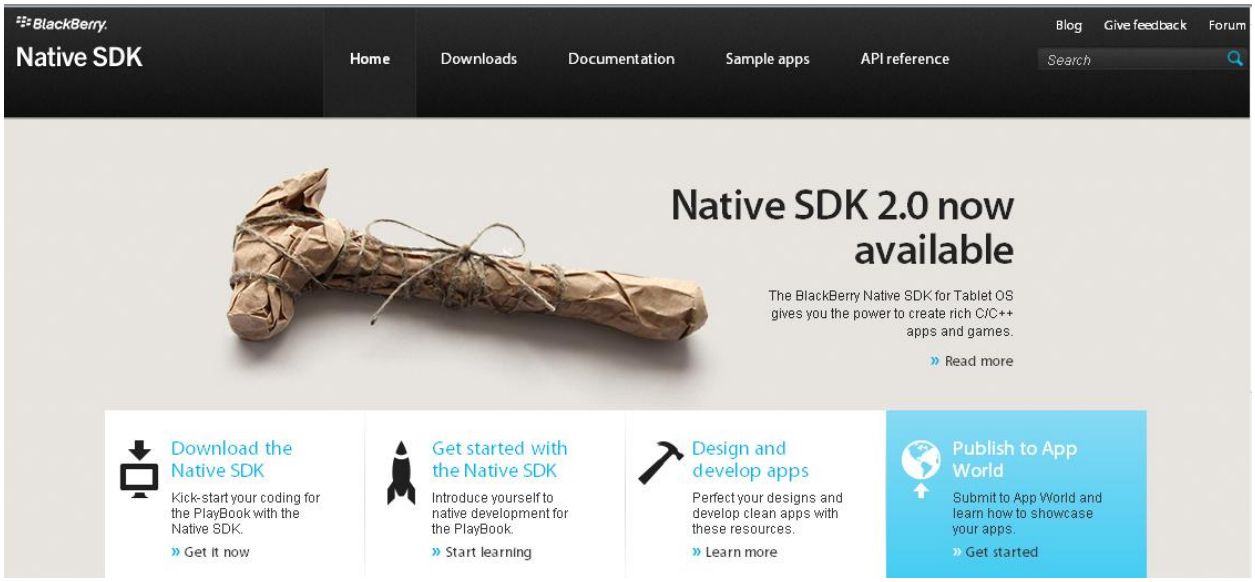
This link brings you right to the landing page for BlackBerry Java SDK Documentation landing page. Be prepared to read!

BlackBerry Java API Refence: http://www.blackberry.com/developers/docs/7.1.0api/

This link brings you to the BlackBerry Java API guide. You might as well launch this before you even start opening the Integrated Development Environment (IDE) you're using to write code. Has code snippets for all available extensions, which means copy and paste will be fun.

BlackBerry Native SDK: http://developer.blackberry.com/native/

This link brings you right to the landing page for BlackBerry Tablet Native Development landing page. Not a bad place to get started to see what can be done with our native tools, especially for the PlayBook. 2.0 is out! 2.0 is out! 2.0 is out!



BlackBerry Native SDK Docs: http://developer.blackberry.com/native/documentation

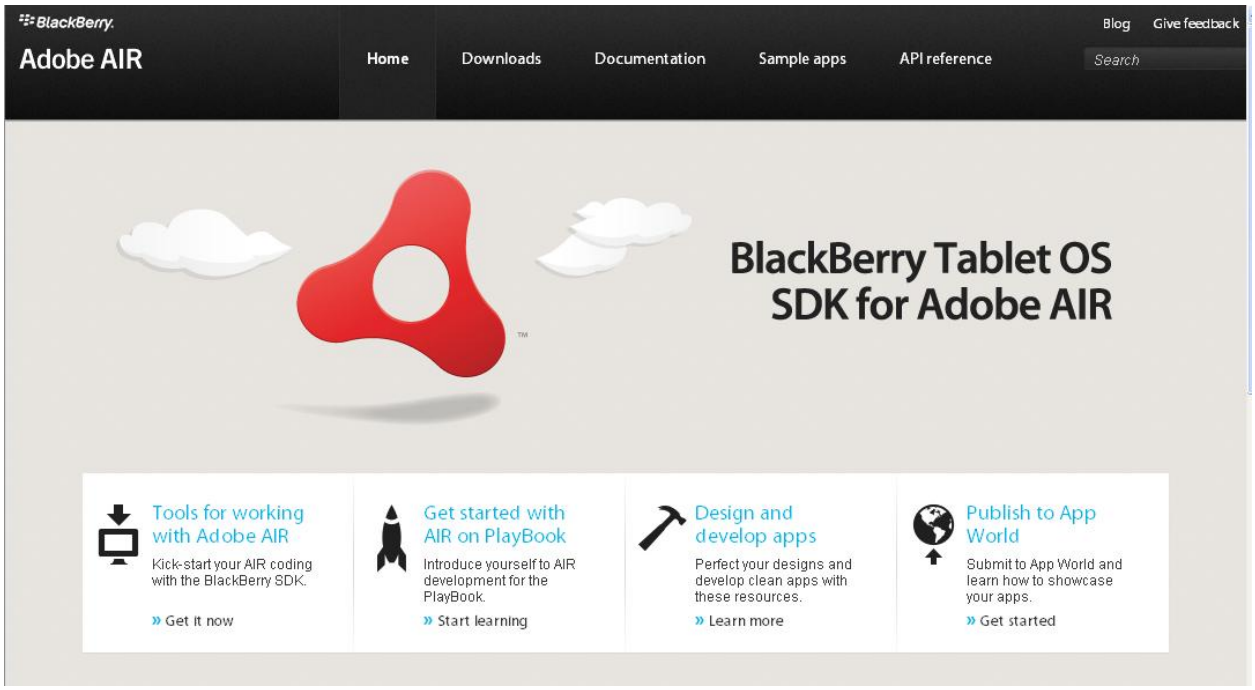
This link brings you right to the landing page for BlackBerry Tablet Native Documentation landing page. Be prepared to read!

BlackBerry Native API Refence: http://developer.blackberry.com/native/reference

This link brings you to the BlackBerry Native API guide. Might as well launch this before you even start opening the Integrated Development Environment (IDE) you're using to write code. Has code snippets for all available extensions, which means copy and paste will be fun.

BlackBerry Adobe Air: http://developer.blackberry.com/air

If you have been building flashy applications for the past 10 years, then you have probably been using a host of Adobe products like Flash and Air. This link brings you right to the landing page for BlackBerry Adobe Air landing page. Not a bad place to get started for Adobe developers that already have application assets to port to the platform.



BlackBerry Adobe Air SDK Docs: http://developer.blackberry.com/air/documentation

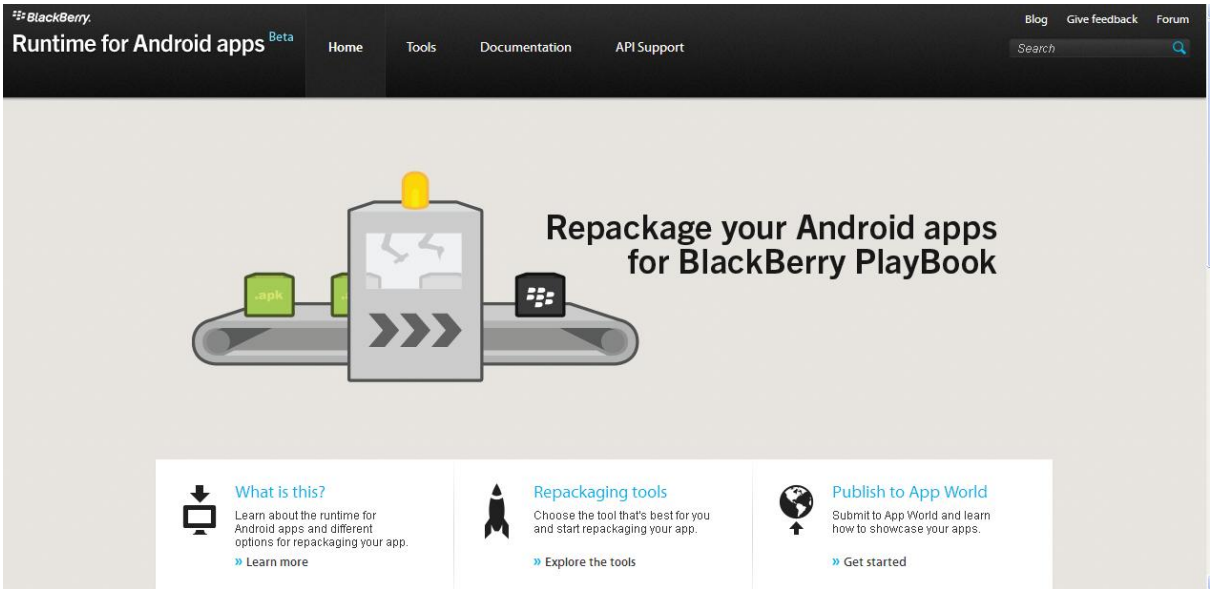
This link brings you right to the landing page for BlackBerry Adobe Air Documentation landing page. Be prepared to read!

BlackBerry Adobe Air API Refence: http://developer.blackberry.com/air/reference

This link brings you to the BlackBerry Adobe Air API guide. You might as well launch this before you even start opening the Integrated Development Environment (IDE) you're using to write code. Has code snippets for all available extensions, which means copy and paste will be fun.

BlackBerry Runtime for Android: http://developer.blackberry.com/android/

This link brings you right to the landing page for BlackBerry Runtime for Android Apps landing page. Not a bad place to get started for Android developers that already have application assets to port to the platform. Test your applications with our online validation tool!



BlackBerry Runtime for Android API Refence: http://developer/android/apisupport

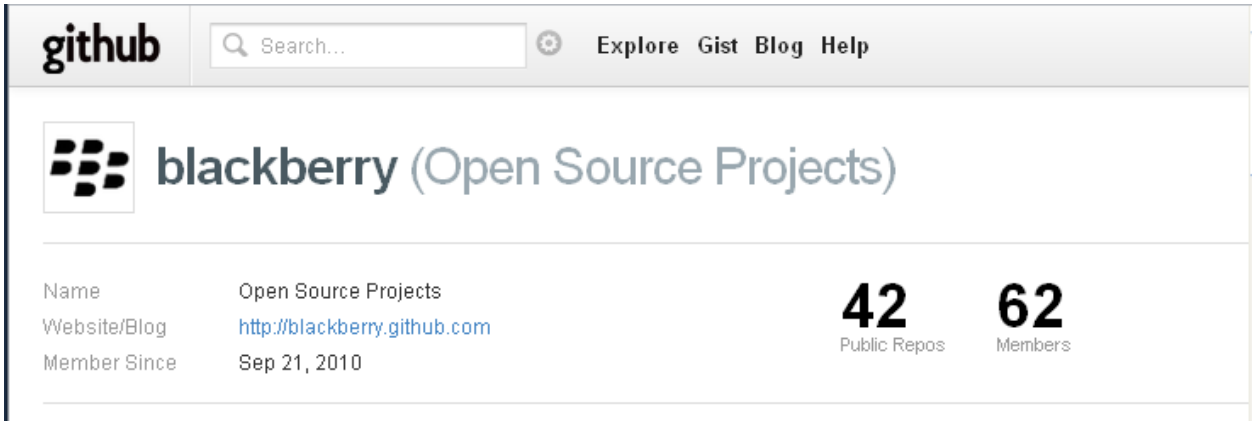
This link brings you to the BlackBerry Runtime for Android API guide. This is a good place to find out which APIs are supported and which of your Android APIs are not. *Note: changes are mostly focused at Intellectual property libraries. We even have an online tool to show what (if at all) would need to be changed for porting.

And I saved the best for last, just to make sure you're still reading…

Blackberry (Open Source Projects): https://github.com/blackberry

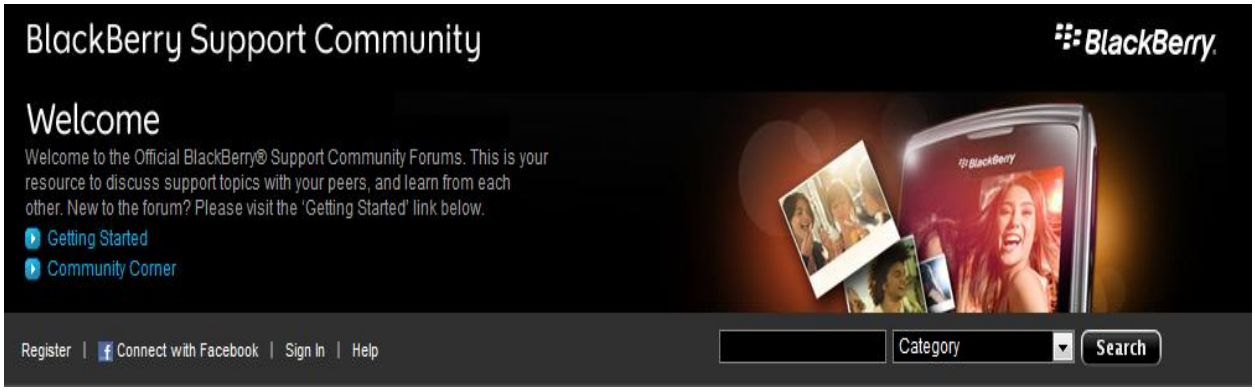
This link is in GOLD font because that's what is hosted there, 24K IT gold! If you have a best friend, well call them right NOW and tell them it's been a good run. Meet your new best friend!

If you're looking for great projects, examples, JavaScript resources, the ***ENTIRE*** WebWorks platform source, boom chop! There are currently 42 Repositories ***AND GROWING DAILY!*** You can even find more samples, sources, and projects under other Organization Members personal spaces. So when you are at the next BlackBerry event, ask about their Repository. All the cool stuff you've seen at DevCon, yeah it's there and many others.



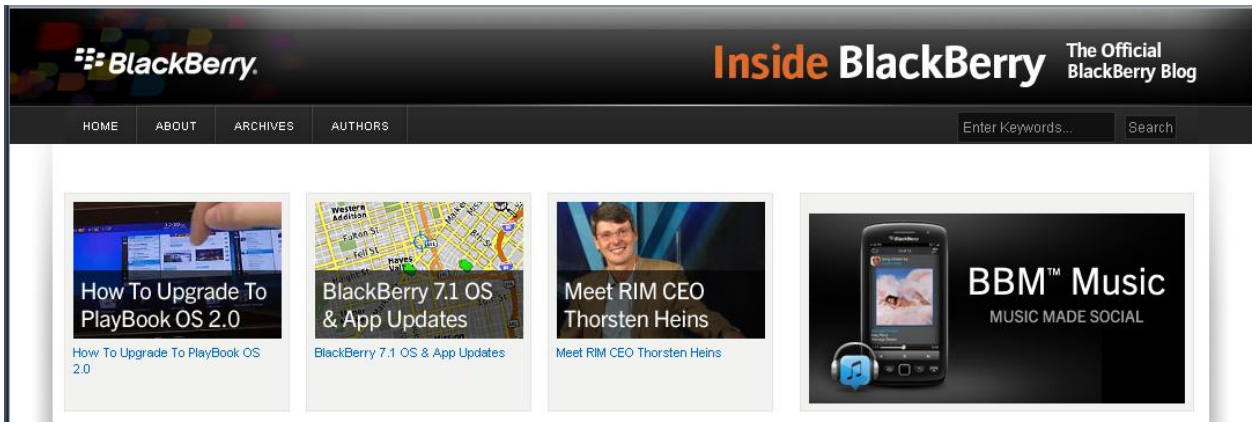
BlackBerry Support Community: http://supportforums.blackberry.com

BlackBerry has been around a long time which means we have an EXTENSIVE SUPPORT COMMUNITY! Meet your new peers, there are over 500,000 of you. If you don't believe me, check it out yourself. This link brings you to the landing page for the RIM community. You can access all of our various communities, since we are a PLATFORM of SERVICES vs. some of those other "Phone" companies, we have tons of communities!!!



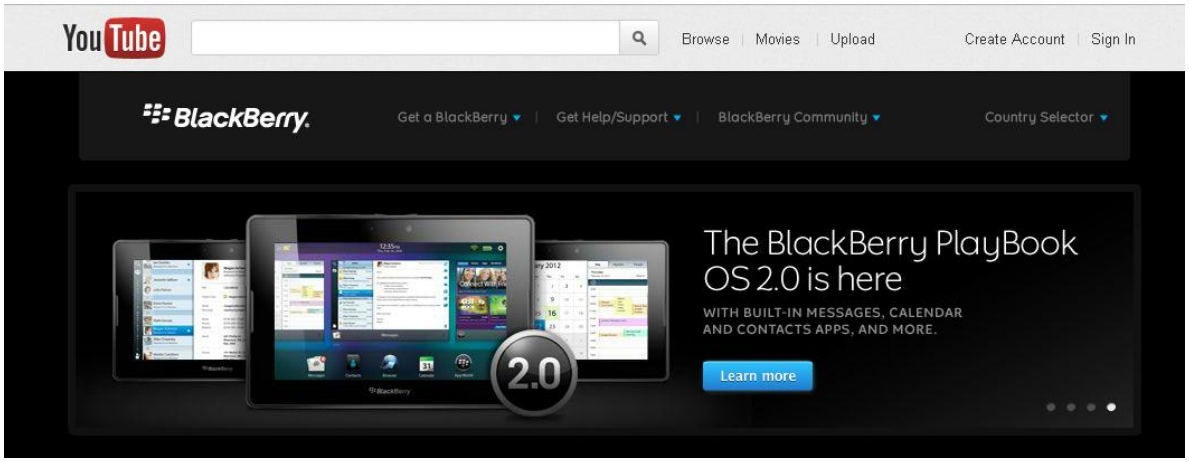
BlackBerry's Official Blog: http://blogs.blackberry.com/

This link brings you to the Inside BlackBerry, Research In Motion (RIM)'s BlackBerry® smartphone blog. While you've been avidly discussing smartphones every day – what you love and what you've just discovered – we've been listening intently. And we feel that we can add our voice and contribute to the community.



BlackBerry on YouTube: http://www.youtube.com/user/BlackBerry

Have you seen a cool video from Research in Motion at one of our conferences and want to watch it again? With over 30+ million Views, you're not the only one! This link brings you to the BlackBerry YouTube channel.



BlackBerry on Twitter: http://twitter.com/#!/BlackBerry

It's a social thing. Ever wonder how you can find out about all the cool things happening at BlackBerry. Follow us!

twitter
Search
Have an account? Sign in
Research In Motion
@BlackBerry
Official Twitter account of Research In Motion.
Waterloo, ON http://www.blackberry.com
Follow
9,768 TWEETS
2,964 FOLLOWING
881,169 FOLLOWERS
2.0
New OS. New possibilities.
#PlayBook

Now You're Going to Need Some Tools to Build

Since the BlackBerry platform offers several difference development approaches, figure out what works best for what you're trying to do.

A. BlackBerry WebWorks HandHeld:

Select the development platform that suits you to develop using web standard technologies like HTML/HTML5, CSS and JavaScript. That pretty much means you can use anything as simple as NotePad, complex as Adobe DreamWeaver, or even over kill as Microsoft Visual Studio. Since Eclipse is free and supports Java and is friendly to web technologies, you can use Eclipse… In fact, you can even turn Eclipse into a "Frankstein Eclipse" by installing all the plug-ins into 1 version. (that discussion is outside the scope of this manual, but totally possible for the daring)…. or

System Requirements

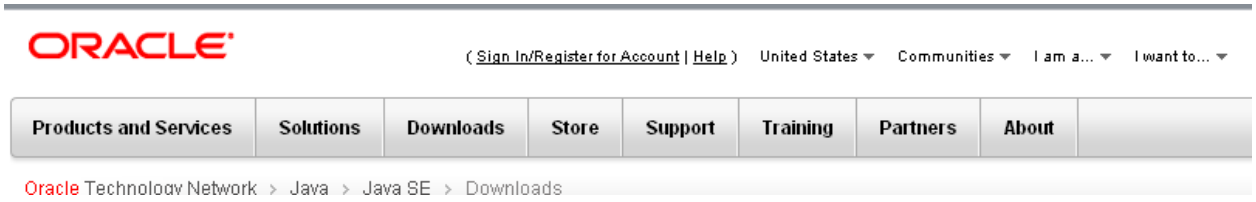
BlackBerry WebWorks SDK for Smartphones

Compiler	Java® SE 6 JDK 32-bit
Processor	Intel® Pentium® 4 or AMD Athlon™ desktop processor 2 GHz or faster
Storage space	1 GB or more available hard disk space
Memory	2 GB RAM or more
Monitor	Resolution of 1024 x 768 or higher
Operating system	Windows® XP SP3 32-bit, Windows® 7 32-bit or 64-bit, or Mac OS X 10.6.4 or later.

Pick the IDE of Choice… If you're a java guy, you're probably already using Eclipse. You can either make a super Eclipse by installing additional plug-ins (e.g.: Web, Java, etc) or if you're going the Web route, check out Aptana. Not a plug-in nor a plug for the company, just a cool version of Eclipse for Web technologies, and it's free!

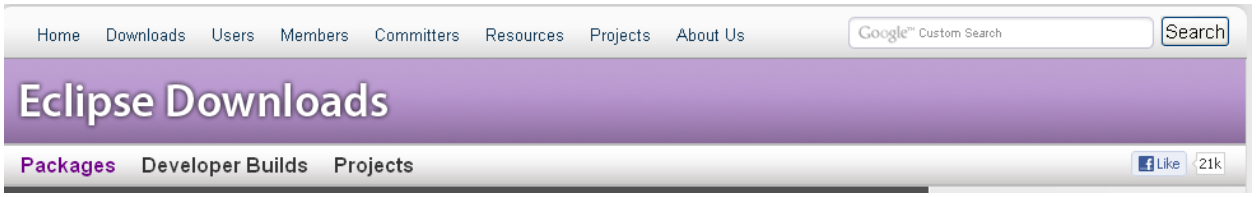
1. **Java JDK version 1.6.x -** http://www.oracle.com/technetwork/java/javase/downloads/index.html

   i. Note: Ensure JDK is downloaded not JRE and Java 1.7 is not supported so you have to download an archive version. Oracle buried it so you will have to dig.



2. **Eclipse IDE for Java Developers** - http://www.eclipse.org/downloads/

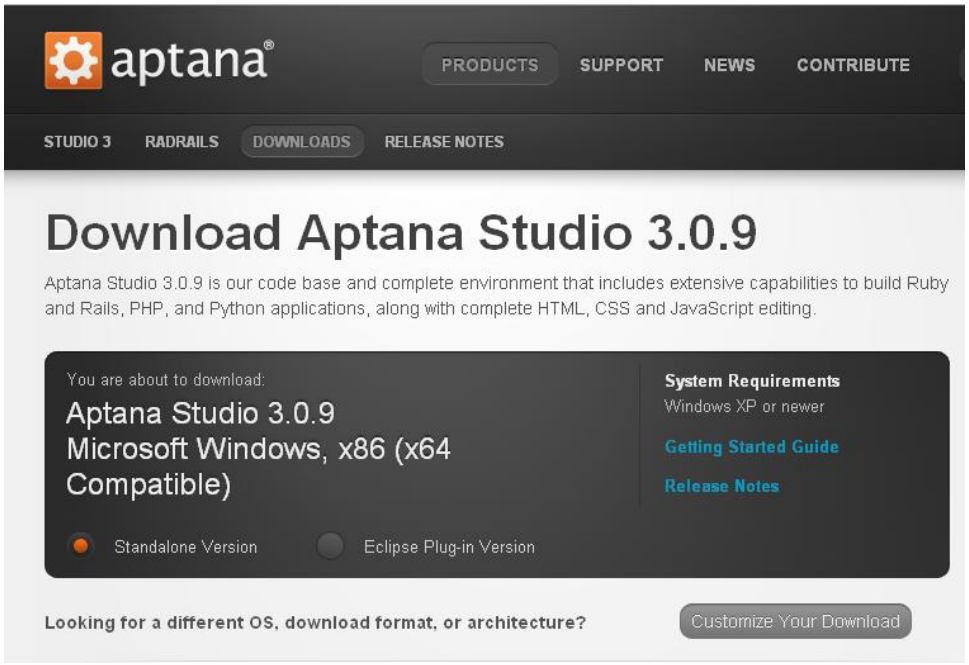
   i. Note: Eclipse has many flavors, choose wisely, or get Eclipse IDE for Java Developers, then start getting the additional plug-ins for Web.



OR

*2a. Aptana Studio 3 -http://aptana.com/products/studio3/download

i. Note: This open source tool is quite cool for building web technologies, especially when it comes to JavaScript. Not RIM sponsored or anything, but found to be used by a lot of web developers in the industry.



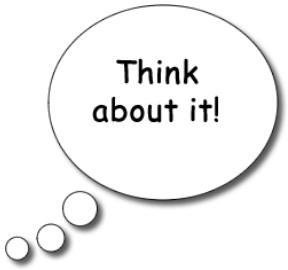
3. Ripple – http://developer.blackberry.com/html5/download/ripple

Ready to test your app and squash some bugs? Simply point the Ripple Emulator to your app's HTML files to get started.

The Ripple Emulator includes:

- Support for multiple devices, platforms and form factors
- Emulation of WebWorks and PhoneGap™ APIs
- Emulation of device sensors such as GPS and Accelerometer
- Quick web browser like environment without the need to compile your app
- Web Inspector for debugging, profiling and memory usage tools.
- Integrates with the BlackBerry WebWorks SDK

Ready to package your application with WebWorks? When you're ready to try your app on a device or simulator, download the WebWorks SDK and configure Ripple for seamless integration.



If you're a developer link me, you probably have a certain way of setting up your development environment. Take a look at the following image… Hmmm using Ripple pointed directly at your project file means you can make a change and simply click "Refresh" inside of Ripple to see ***INSTANT CHANGES!!***

https://bdsc.webapps.blackberry.com/html5/documentation/ww_developing/accessing_a_local_project_in_ripple_1948645_11.html

Accessing a project from the file system in Ripple

From the Ripple emulator, you can open files directly from the local file system on your computer if you do not have a web server set up.

1. Copy your project folder and all of its contents into the **RippleSites** folder. If this folder doesn't exist, you must create it in one of the following locations:
   - Windows XP: `C:\Documents and Settings\<Username>\RippleSites`
   - Windows 7: `C:\Users\<Username>\RippleSites`
   - Mac OS: `/Users/<Username>/RippleSites`
2. From Ripple, in the address bar, type `http://localhost:9900/` followed by your project folder and landing page. For example:

```
http://localhost:9900/HelloWorld/index.html
```

3a. **Ripple Plug-in for Google Chrome**- The early version of Ripple was a Google Chrome plug-in which is still an available option for rapidly testing changes. So if you have Chrome, or would like to try it.

A. **Google Chrome – http://www.google.com/chrome**

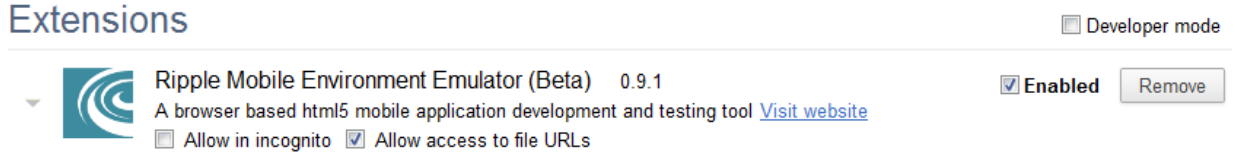
B. **RIM Ripple Emulator (for Google Chrome) - http://ripple.tinyhippos.com/**

Note: This download requires you to navigate to this link via Google Chrome to install.

Note2: Modify Google Chrome's shortcut to

[chrom_path]\chrome.exe --disable-web-security --allow-file-access-from-files

Note 3: Enable the "Allow access to file URLs" in Chrome – Options > Tools > Extensions

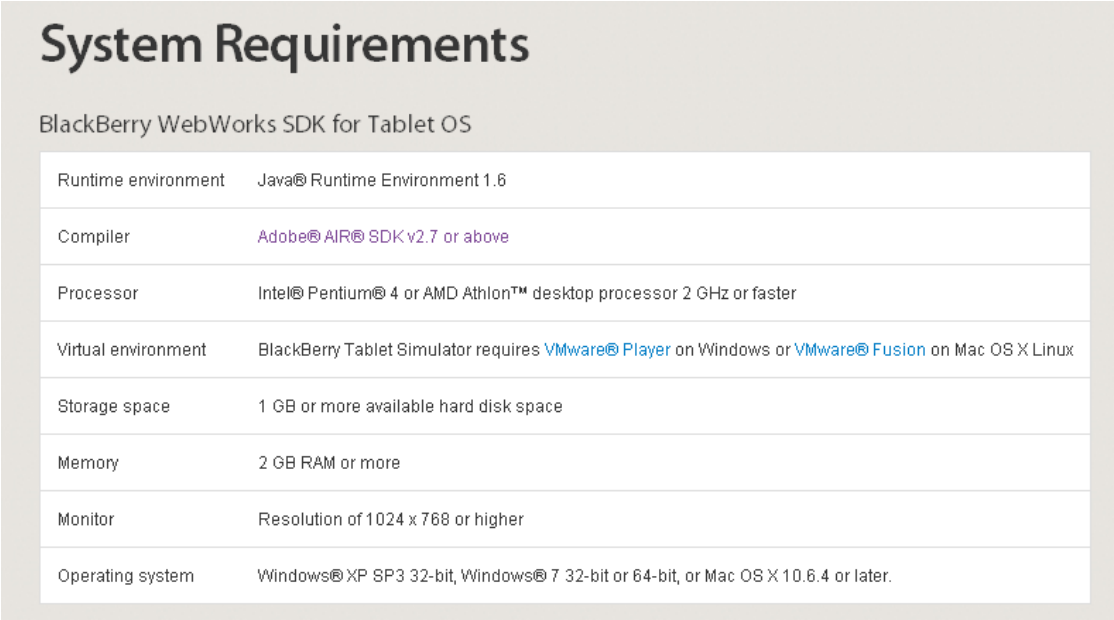


4. BlackBerry WebWorks SDKs: http://developer.blackberry.com/html5/download/sdk

i. Note: Might as well get both the Smartphone and Tablet OS SDKs. As part of the BlackBerry WebWorks roadmap, this will become a single download in the future. The SDK is used for packaging your application to test out on simulators and actual devices.

B. BlackBerry WebWorks Tablet:

Since we're talking BlackBerry WebWorks here, it's pretty much the same handheld tools options for building your software. Only difference comes when you are going to package your application and test it on the PlayBook simulator or an actual device. So you can repeat steps 1 -3 last listed above. When it comes to installing the Tablet OS SDK there is a prerequisite to install the Adobe Air SDK 2.5+. We support the latest 3.x too!

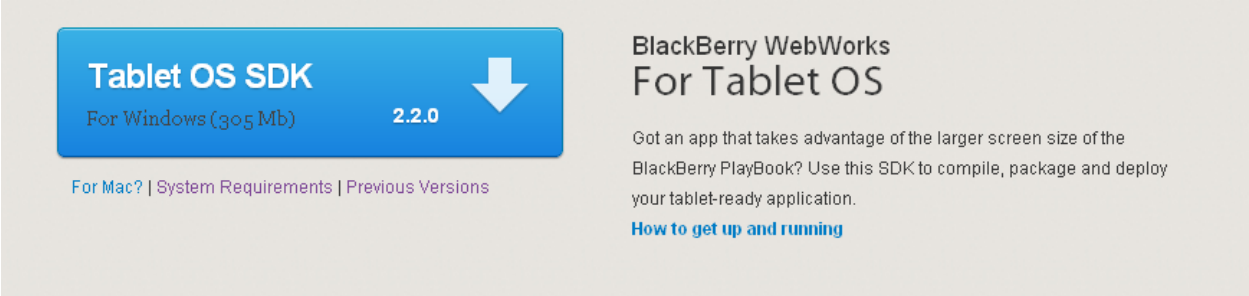


System Requirements

BlackBerry WebWorks SDK for Tablet OS

Runtime environment	Java® Runtime Environment 1.6
Compiler	Adobe® AIR® SDK v2.7 or above
Processor	Intel® Pentium® 4 or AMD Athlon™ desktop processor 2 GHz or faster
Virtual environment	BlackBerry Tablet Simulator requires VMware® Player on Windows or VMware® Fusion on Mac OS X Linux
Storage space	1 GB or more available hard disk space
Memory	2 GB RAM or more
Monitor	Resolution of 1024 x 768 or higher
Operating system	Windows® XP SP3 32-bit, Windows® 7 32-bit or 64-bit, or Mac OS X 10.6.4 or later.

1. **Adobe Air SDK: http://www.adobe.com/products/air/sdk/**
2. **BlackBerry WebWorks Tablet OS SDK: http://developer.blackberry.com/html5/download/sdk**
    i. Note: You must install the Adobe SDK first as the Tablet OS SDK will prompt you for install location during installation.



Tablet OS SDK
For Windows (305 Mb) 2.2.0

For Mac? | System Requirements | Previous Versions

BlackBerry WebWorks
For Tablet OS

Got an app that takes advantage of the larger screen size of the BlackBerry PlayBook? Use this SDK to compile, package and deploy your tablet-ready application.

How to get up and running

C. Adobe Air Applications

Leverage your existing Adobe® tools and content to create breakthrough applications for the BlackBerry® Tablet OS. If you're an existing BlackBerry developer, add a new dimension to your development skills and create compelling applications for a new mobile device that complements your existing applications.

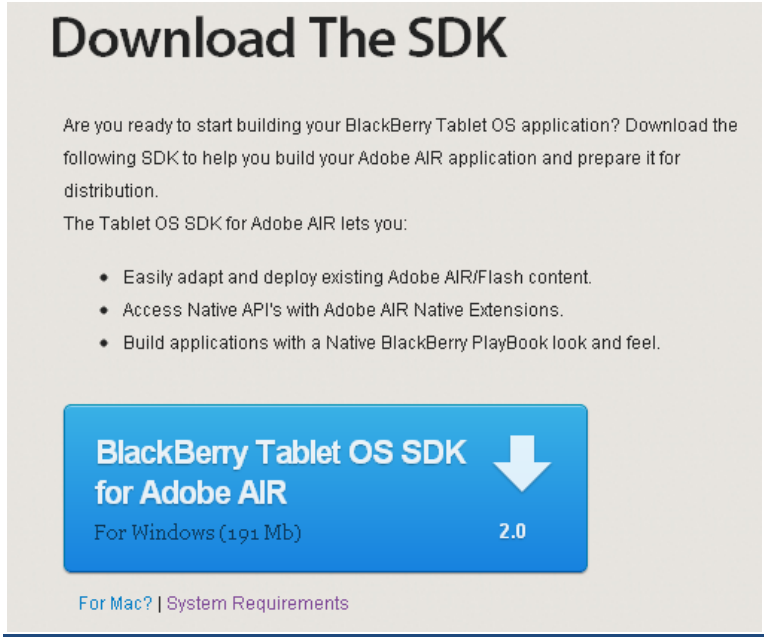
Flash, AIR, and Flex are supported on BlackBerry® PlayBook™ OS v1.0 and above.

System Requirements

BlackBerry Tablet OS SDK for Adobe AIR

Runtime environment	Both of the following: Java® Runtime Environment 1.6 Adobe® AIR® SDK 3.1 or higher
Development environment	Adobe® Flash Builder® 4.6 or higher
Virtual environment	BlackBerry Tablet Simulator requires VMware® Player on Windows or VMware® Fusion on Mac OS X
Processor	Intel® Pentium® 4 or AMD Athlon™ desktop processor 2 GHz or faster
Storage space	1 GB available hard disk space or more
Memory	2 GB RAM or more
Monitor	Resolution of 1024 x 768 or higher
Operating system	Windows® XP SP3, Windows® 7, or Mac OS X 10.6.8 or later

1. **Adobe FlashBuilder 4.6 - http://www.adobe.com/products/flash-builder.html**
    a. Note: FlashBuilder supports and works with the Tablet OS nicely.
2. **BlackBerry Tablet OS SDK for Adobe Air - http://developer.blackberry.com/html5/download/sdk**



D. BlackBerry Native SDK Applications

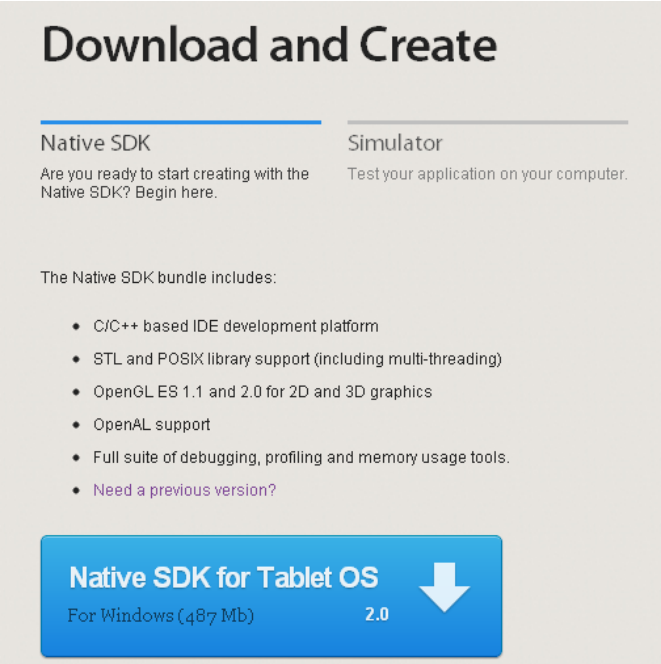
So who is the Native SDK for? Developers who know they need the highest level of performance from their applications – like 3D game developers for example. Or developers who need to do something that they can't do in the other frameworks and might be able to do using the NDK. Or those of you who already have an existing C++ application that you want to port to the PlayBook. Of course, if you just want to play around with the NDK to learn what's possible (and there's a lot), that's encouraged as well!

System Requirements

Runtime environment	Java® SE 6 Runtime Environment
Processor	Intel® Pentium® 4 or AMD Athlon™ desktop processor 2 GHz or faster
Virtual environment	VMware® Player to run the BlackBerry PlayBook Simulator on Windows or Linux systems VMWare Fusion to run the BlackBerry PlayBook Simulator on Mac systems
Storage space	1 GB or more available hard disk space
Memory	2 GB RAM or more
Monitor	Resolution of 1024 x 768 or higher
Operating system	Windows® XP SP3, Windows Vista® Ultimate or Enterprise, Windows® 7, or Ubuntu® 11.04 , Mac OS X 10.6 Snow Leopard, and Mac OS X 10.7 Lion **In order to run the installer and the IDE on Ubuntu 64-bit, you need to install the 32-bit libraries:** 1. `sudo apt-get install ia32-libs` 2. Answer yes to all the questions.

1. **Check System requirements for installing SDK: http://developer.blackberry.com/native/download/requirements**

2. **Download Native SDK for Tablet OS: http://developer.blackberry.com/native/download**



3. **Download the Simulator: http://developer.blackberry.com/native/download**

    a. Note: The link to the simulator is hard to spot, but it's right under the title "Download and Create" and appears greyed out until you click it.

E. BlackBerry Runtime for Android Applications

As a developer, you can use one of the following tools ***(Eclipse Plug-in, Online Tool or Command Line Tool)*** to not only repackage your application to BAR file format but also to check how compatible your application is for running on the BlackBerry Tablet OS. Some of the APIs in the Android SDK may not be supported, or only partially supported by the BlackBerry Runtime for Android apps. Before you begin using the tools, you must create a vendor account for BlackBerry App World. For more information on creating the vendor account, visit https://appworld.blackberry.com/isvportal/home/login.seam.

1. **Read about your options and cover prerequisites: http://developer.blackberry.com/android/documentation/install_plugin_prerequisites_1895476_11.html**

    a. Note: I highly recommend reading the above instructions. Before you can install and use the BlackBerry Plug-in for Android Development Tools, you must have installed and configured ADT plug-in for Eclipse rev12 or newer and Android SDK (SDK Platform Android 2.3.3, API 10) in Eclipse. You also need JDK 5 or JDK 6 (JRE alone is not sufficient) installed on your system. For more information, visit the System requirements section.

2. **Download and Install Eclipse IDE: http://www.eclipse.org/downloads/packages/eclipse-classic-37/indigor**

a. Note: If you're using Mac get Eclipse IDE for Mac OS X (Cocoa 32)

3. **Download Android SDK**: **http://developer.android.com/sdk/index.html**

   a. Note: Download the file android-sdk_r15-windows.zip.

4. **Download Android Development Tools**: **http://developer.android.com/sdk/eclipse-adt.html#installing**

   a. Note: Follow instructions provided by Android platform.

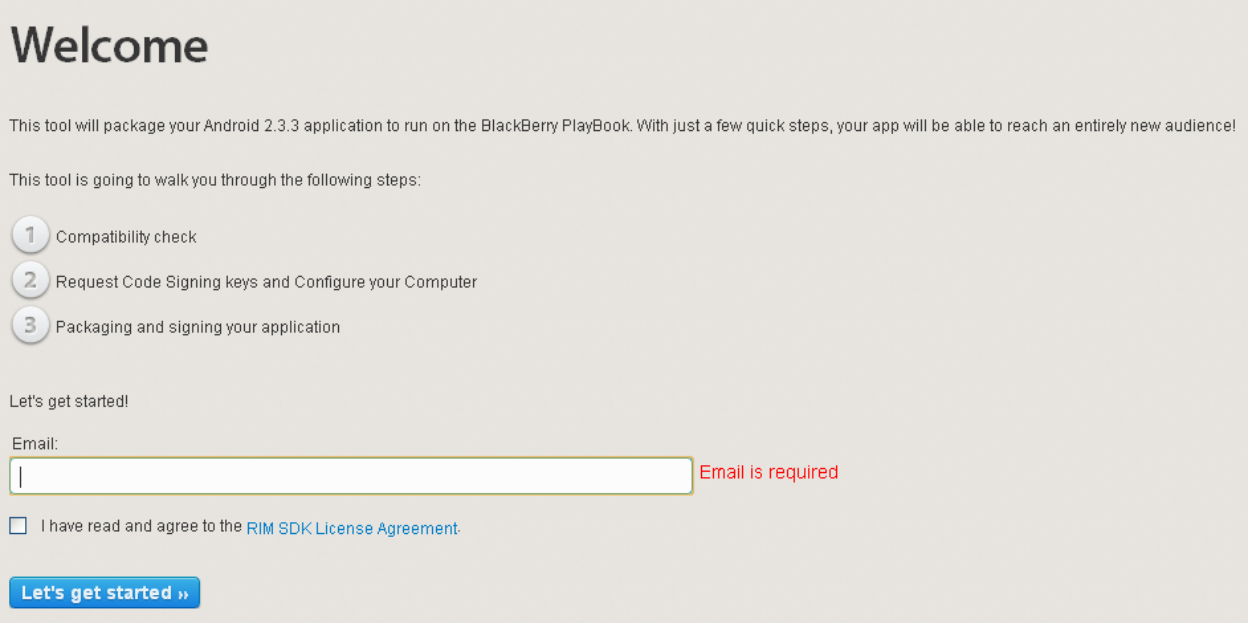
5. **Install BlackBerry Plug-in for Android Development Tools:**
   http://developer.blackberry.com/android/downloads/eclipseplugin/

   a. Note: Within Eclipse you go to "Help -> Install New Software …-> Add" the above URL is the location of the Eclipse Plug-in.

BlackBerry Packager for Android apps Online tool

A simple web interface that allows you to verify, repackage, and sign your app without any additional software downloads. Point the tool to the Android .apk file and the Android SDK on your computer, and the tool will do the rest, with just few mouse clicks from you.

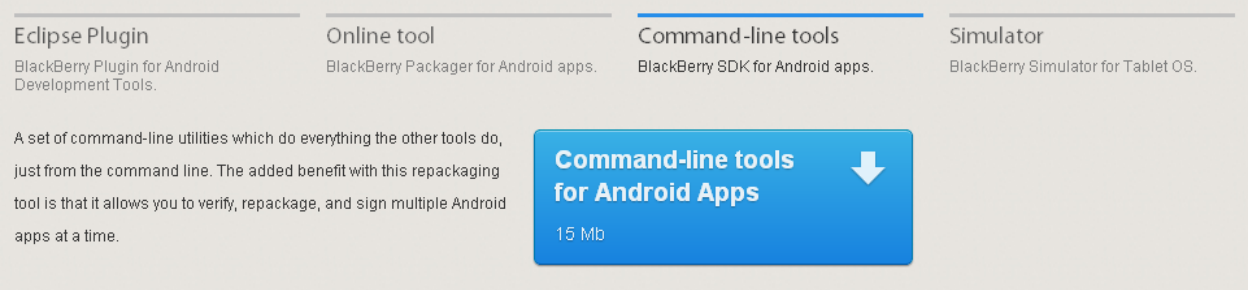
1. **Click through the links to complete online:**
   http://developer.blackberry.com/android/bpaa



BlackBerry Packager for Android apps Command Line tool

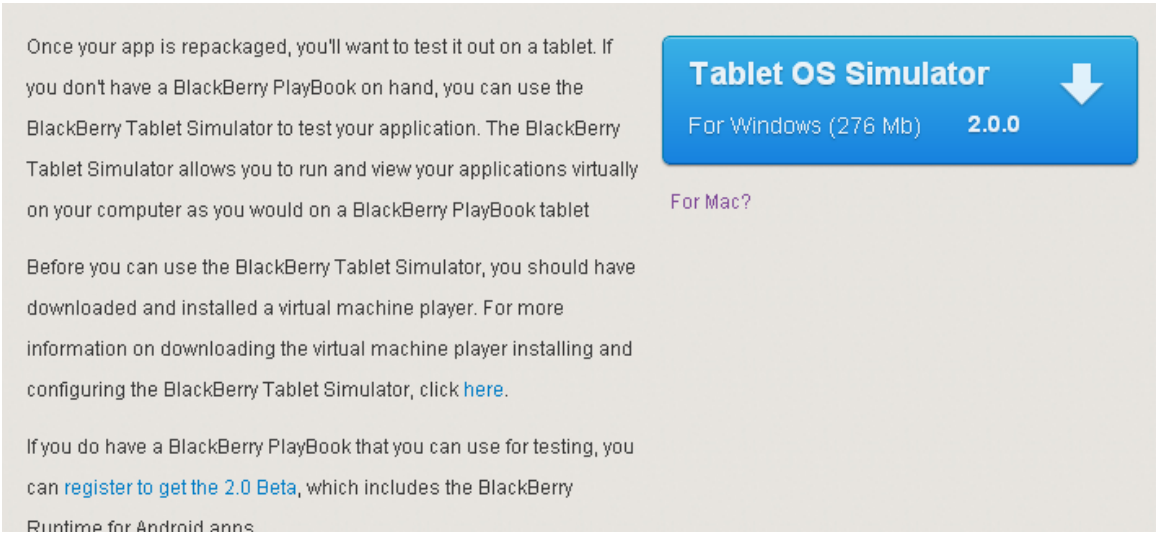
A set of command-line utilities which do everything the other tools do, just from the command line. The added benefit with this repackaging tool is that it allows you to verify, repackage, and sign multiple Android apps at a time.

1. **Download and install command line tool: http://developer.blackberry.com/android/tool/**



6. **Install BlackBerry Tablet OS Simulator for Runtime for Android: http://developer.blackberry.com/android/tool#simulator**

   a. Note: Since the Android Runtime is not available until Tablet OS 2.0, you will need to download this simulator separate from the above simulator for WebWorks.



Now You're Going to Need Some Tools to Test

Testing applications on the BlackBerry platform is amazing. You can use both emulators and simulators for both handhelds and tablet. RIM offers pretty much a simulator of each device they still support. The simulators are awesome since they allow you to simulate pretty much everything.

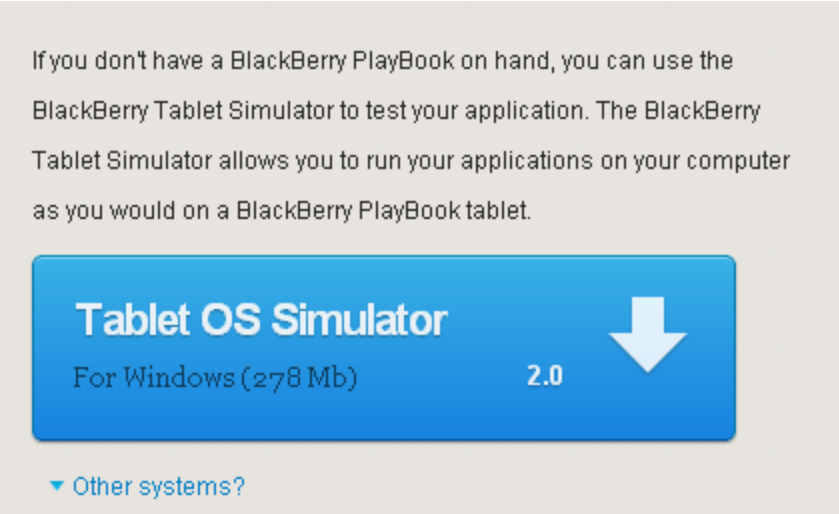
A. Simulators

Smartphones: http://us.blackberry.com/developers/resources/simulators.jsp

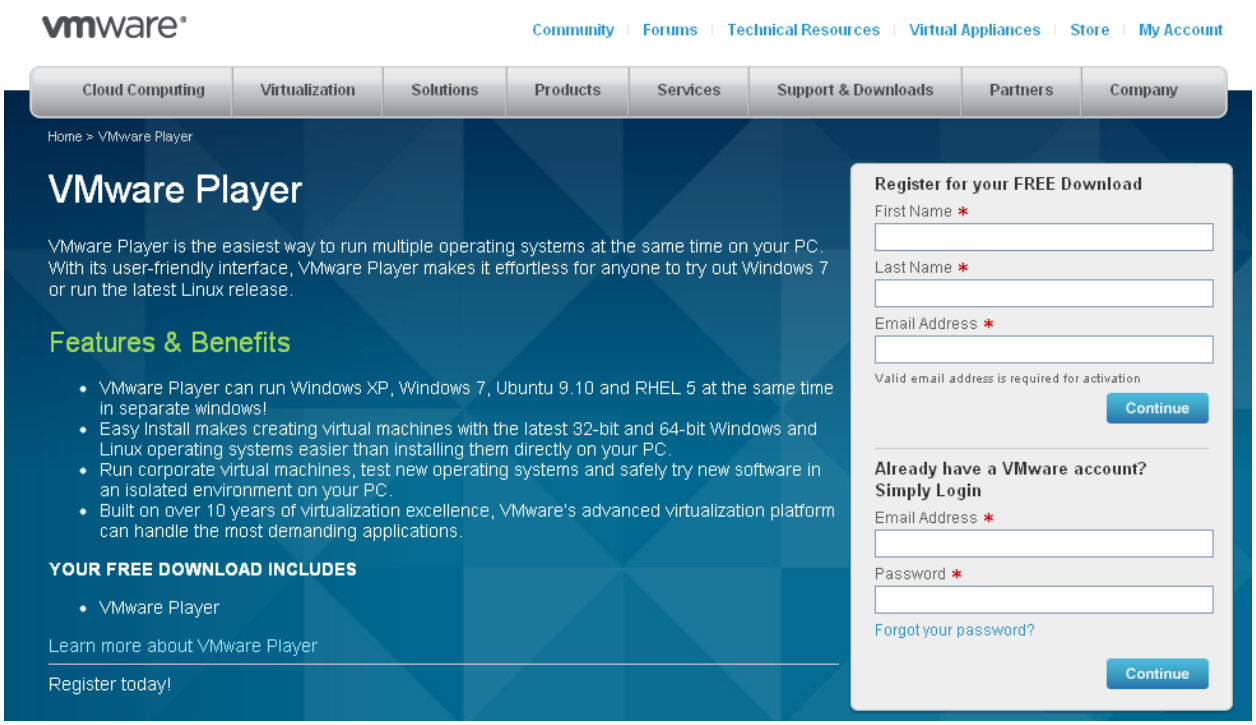
Since you can pretty much download almost any device RIM supports, it's best to go to the site and download the one you're looking for specifically. Note if you download some of the OOOOOLLLLDDDD devices, remember to keep in mind that some additional configurations may need to be made to the simulator to work. (e.g.: SD card, etc).

1. Tablet: http://developer.blackberry.com/native/download

The link to the simulator is hard to spot, but it's right under the title "Download and Create" and appears greyed out until you click it. Don't forget that you will need VMPlayer in order to run the simulator. Link is provided below.



1. **VM Player - https://www.vmware.com/tryvmware/?p=player&lp=1**



Runtime for Android:

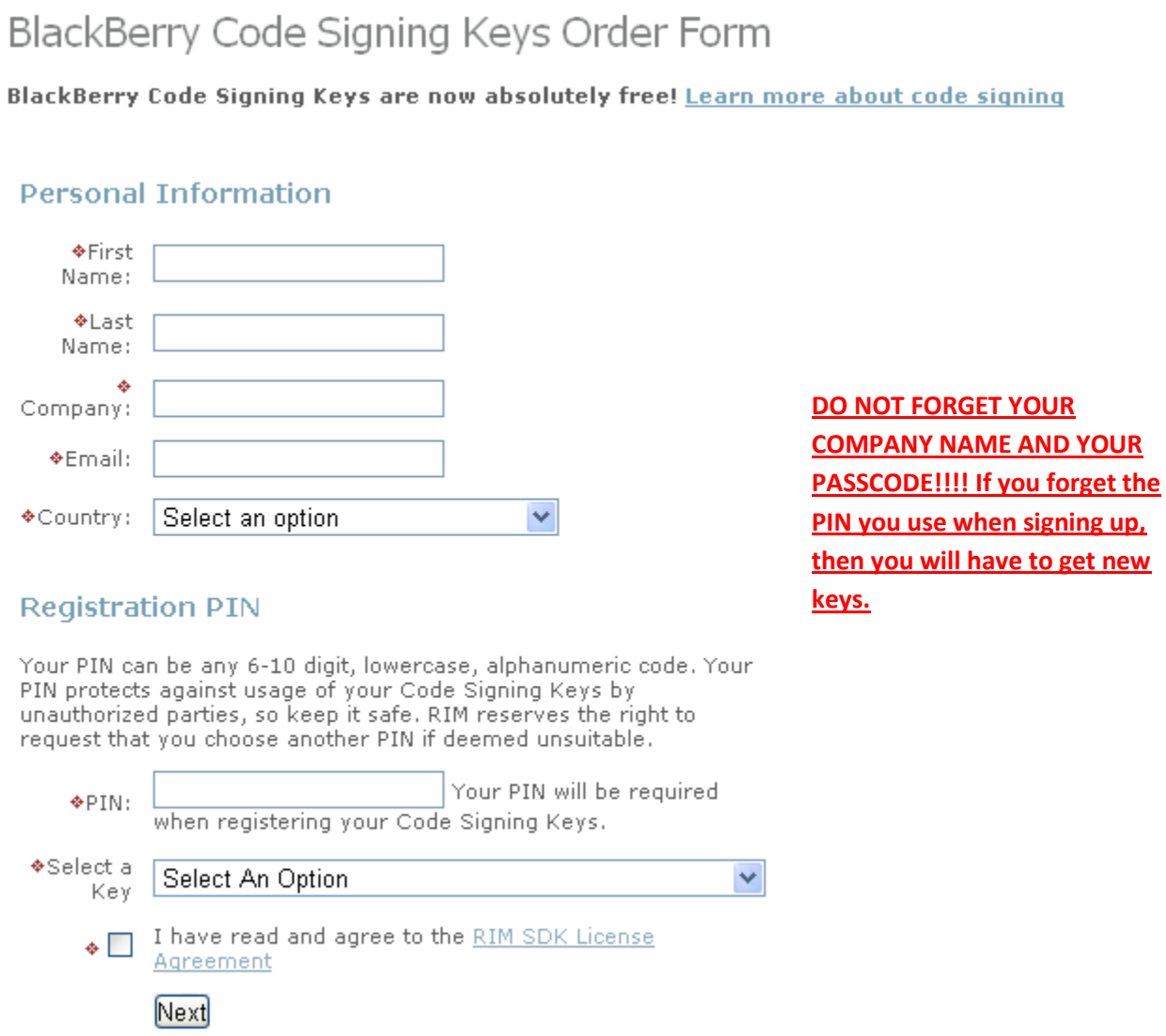
1. **BlackBerry Tablet OS Simulator for Runtime for Android: http://developer.blackberry.com/android/tool#simulator**

B. Signing Keys

So in order to test your application on a physical device you are going to need signing keys. Signing keys are also used when packaging your application to be distributed, whether on App World or internally. There is no charge for signing keys and EVERY developer should apply for their own keys. Reason why I mention that is because when you load the keys, they get tied to a specific development environment (laptop, etc), and **when you sign your application for release the same keys should be used each time. (Notice the red font) All I'm saying is have keys specific to production builds.**

Register for Signing Keys - https://www.blackberry.com/SignedKeys/

Note: If you pre-register for signing keys, we will be able to show you how you compile and sign both Handheld and PlayBook applications using the tools above. The signing process takes approximately ~~2 business days (or less)~~ ***2 hours*** to receive your keys. Each attendee should register for his or her own keys as they are tied to each workstation+user. When registering, please ensure to select both "Handheld + PlayBook" so that you will receive both with a single registration.



DO NOT FORGET YOUR COMPANY NAME AND YOUR PASSCODE!!!! If you forget the PIN you use when signing up, then you will have to get new keys.

C. Signing Keys Installation - SmartPhone

Since it only takes about an hour to get your signing keys, here is a quick snap shot on how to install them. You will need the BlackBerry WebWorks SDK to get up and running. Note: There is a different process for your Tablet. (see below)

Set up for signing smartphone apps

The BlackBerry WebWorks Packager includes the BlackBerry Signature Tool so that you can install a registration key and sign the .cod file of your BlackBerry WebWorks application.

Applications that you intend to run on a BlackBerry smartphone (rather than on a simulator) require signatures from the BlackBerry Signing Authority Tool. You must use the BlackBerry Signature Tool to request and receive signatures.

If you install a registration key before you install the BlackBerry WebWorks Packager, you should create an unsigned .cod file for an application and then sign the .cod file in the same way that you requested the registration key.

Install the new registry key with the BlackBerry Signature Tool

1. Visit http://developer.blackberry.com/html5/signingkey and complete the registration form.

   After you complete the form, Research In Motion sends an email message containing a .csi file. The .csi file contains a list of signatures and your registration information.

2. At the command prompt, navigate to the **bin** folder within the installation folder for the BlackBerry WebWorks Packager installation directory.
3. Type the following command, including the full path of the .csi file:

   ```
   java -jar SignatureTool.jar <.csi file path>
   ```

4. If a dialog box appears that indicates that a private key cannot be found, perform the following actions:

   1. Click **Yes**.
   2. Type a password for the private key.
   3. Type the password to confirm it.
   4. Click **OK**.
   5. Move the mouse to generate random data for the new private key.

5. In the **Registration PIN** field, type the PIN that RIM provided.
6. In the **Private Key Password** field, type a password of at least eight characters. This is the private key password.
7. Click **Register**.
8. Click **Exit**.

D. Signing Keys Installation - Tablet

Since it only takes about an hour to get your signing keys, here is a quick snap shot on how to install them. You will need the BlackBerry WebWorks SDK to get up and running. Note: There is a different process for your smart phone. (see above)

Set up for signing tablet apps

If you want to test your application on a tablet without signing it, you can create and install a debug token on the tablet. For more information about debug tokens, see "Using debug tokens".

Configure your computer to sign applications

The following steps outlined in this section apply to first-time configuration for signing and for requesting debug tokens.

If you are upgrading the BlackBerry WebWorks SDK, perform the steps outlined in the *After an SDK upgrade* section.

1. Request permission to sign your tablet application by completing the web form at http://developer.blackberry.com/html5/signingkey.

   Remember the PIN number you provided.

2. After your application is accepted, you will receive two .csj registration files by email. Each file arrives in a separate email message with information about the purpose of the file attached. Save these files to a location on your computer.

   - **client-RDK-xxxxxx.csj** - This is the file that you use to sign your applications and publish to the BlackBerry App World storefront.
   - **client-PBDT-xxxxx.csj** - This file is used to generate a debug token that you can use to test your application on a tablet. PBDT stands for "PlayBook Debug Token".

   These files are used to install code signing keys. They can only be used once.

3. Register with the RIM Signing Authority using your .csj registration file for application signing. From the same **\bbwp\blackberry-tablet-sdk\bin** folder located in the BlackBerry WebWorks SDK installation folder, run the .bar signing tool to enroll with the signing authority server:

```
blackberry-signer -register -csjpin <csj pin>
    -storepass <KeystorePassword> <client-RDK-xxxxxx.csj file>
    <client-PBDT-xxxxx.csj file>
```

where

- *<csj pin>* is the PIN you specified on the web form when you requested code signing keys
- *<KeystorePassword>* is a password that you specify for the keystore
- *<client-RDK-xxxxxx.csj file>* is the app signing .csj file sent by email after you registered
- *<client-PBDT-xxxxx.csj file>* is the debug token .csj file sent by email after you registered

This command creates the following files: author.p12, barsigner.csk, and barsigner.db.

Backing up your files

The CSJ files that you used to install your code signing keys can only be used once. They are disabled after a successful installation, which makes it important to back up your code signing keys after they have been installed. Code signing keys can be restored to the original computer that they were installed to or restored to another computer. You can also use this information to transfer your code signing keys to multiple computers and sign from any of them.

The files that need to be backed up are: **author.p12**, **barsigner.csk** and **barsigner.db**. The barsigner files are located in the directories outlined below. These are stored in a central location in the user's profile directory and used by all BlackBerry Tablet OS development tools. Their location will vary based on the operating system you use. To restore your code signing keys, copy the files back to the directory outlined below.

- Windows XP: `%HOMEPATH%\Local Settings\Application Data\Research In Motion`
- Windows Vista and Windows 7: `%HOMEPATH%\AppData\Local\Research In Motion`
- Mac OS: `~/Library/Research In Motion`
- UNIX or Linux: `~/.rim`

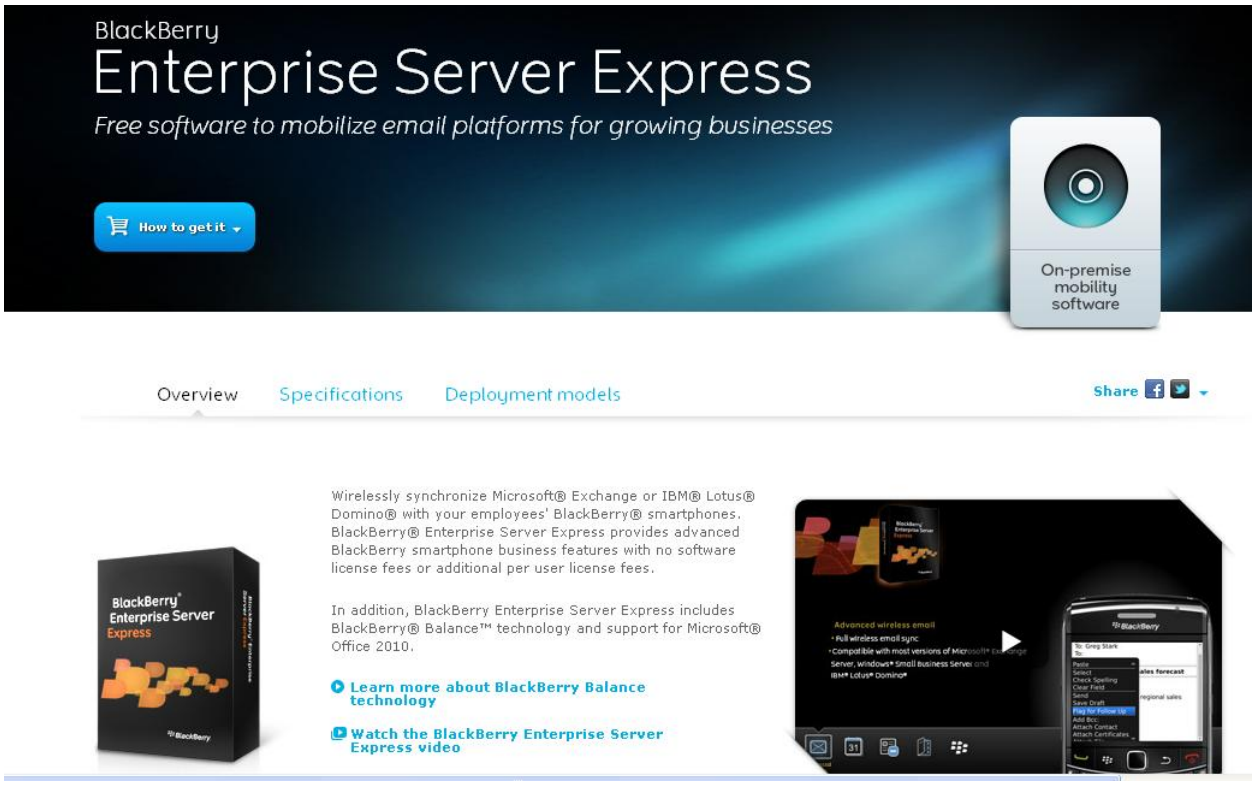
By default, `%HOMEPATH%` is `C:\Documents and Settings` on Windows XP and `C:\Users` on Windows Vista and Windows 7.

E. Interesting Topics to Consider

BlackBerry is a unified platform of tools and resources. We're not just faucet heads, we have GOLD STANDARD plumbing connected to each device that can deliver game-changing applications.

Did you know that you don't have to be a huge organization with hundreds of employees to take advantage of the BlackBerry platform? ***You can provide advanced BlackBerry smartphone business features with no software license fees or additional per user license fees!***

BlackBerry Enterprise Server Express : http://us.blackberry.com/business/software/besx/



Like any time you're going to be offering a product. You should know your audiences, know their habits and understand what and how they use applications. That's why we offer:

BlackBerry Analytics Service: http://us.blackberry.com/developers/platform/analyticsservice/

And it's FREE!

Analytics Service

Measure and optimize your Java® based BlackBerry® smartphone apps

The free Analytics Service Powered by Webtrends helps you improve your end user experience, optimize your apps and know (not guess) where to invest your resources to increase your ROI.

With the reports and metrics available with the Analytics Service, you can find out if your app is being used the way it was designed to be used. You can also identify user behavior and segments to discover new business opportunities and measure how much your app is being used on different technology versions and in different locations.

The Analytics Service includes everything you need to get started with analytics: an SDK, developer documents and a web-based reporting interface.

The Analytics Service requires BlackBerry® Device Software v4.5 or higher.

- Download the Analytics Service v1.0 SDK (Updated Oct 11, 2011)
- Learn More

Register for Analytics Service › Log in to the Analytics Service ›

So if this is your first rodeo in mobility, then here are a few links that should be considered.

WebWorks Content Rendering on High-Resolution Devices:	http://supportforums.blackberry.com/t5/Web-and-WebWorks-Development/WebWorks-Content-Rendering-on-High-Resolution-Devices/ta-p/1344439
Building a BlackBerry WebWorks Javascript Extension.	http://supportforums.blackberry.com/t5/Web-and-WebWorks-Development/Building-a-BlackBerry-WebWorks-JavaScript-Extension/ta-p/494139
BlackBerry (Open Source Projects)	https://github.com/blackberry
Call SOAP Webservices with AJAX:	http://www.ibm.com/developerworks/webservices/library/ws-wsajax/
Common BlackBerry WebWorks development pitfalls that can be avoided	http://supportforums.blackberry.com/t5/Web-and-WebWorks-Development/Common-BlackBerry-WebWorks-development-pitfalls-that-can-be/ta-p/624712